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Sequence Listing could not be accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2010; month=9; day=27; hr=11; min=37; sec=0; ms=452; ]

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\*\*\*\*\*

Reviewer Comments:

(errored portion of Sequence 4 below)

<400> 4

atg agc ctt ttg gat gct cat atc cca cag ttg gtg gcc tcc cag tcg  
48  
Met Ser Leu Leu Asp Ala His Ile Pro Gln Leu Val Ala Ser Gln Ser  
1 5 10 15

gcg ttt gcc gcc aag gcg ggg ctg atg cgg cac acg atc ggt cag gcc  
96  
Ala Phe Ala Ala Lys Ala Gly Leu Met Arg His Thr Ile Gly Gln Ala  
20 25 30

gag cag gcg gcg atg tcg gct cag gcg ttt cac cag ggg gag tcg tcg  
144  
Glu Gln Ala Ala Met Ser Ala Gln Ala Phe His Gln Gly Glu Ser Ser  
35 40 45

gcg gcg ttt cag gcc gcc cat gcc cgg ttt gtg gcg gcg gcc gcc aaa  
192  
Ala Ala Phe Gln Ala Ala His Ala Arg Phe Val Ala Ala Ala Lys  
50 55 60

gtc aac acc ttg ttg gat gtc gcg cag gcg aat ctg ggt gag gcc gcc  
240  
Val Asn Thr Leu Leu Asp Val Ala Gln Ala Asn Leu Gly Glu Ala Ala  
65 70 75 80

ggt acc tat gtg gcc gcc gat gct gcg gcc gcg tcg acc tat acc ggg  
288

Gly Thr Tyr Val Ala Ala Asp Ala Ala Ala Ala Ser Thr Tyr Thr Gly  
85 90 95

ttc tga  
294  
Phe \*

Please remove the asterisk "\*" under the above stop codon "tga": since stop codons do not code for an amino acid, nothing should be under them. Also, asterisks are non-ASCII characters which cannot be processed. Same error in subsequent coding Sequences 8, 12, 14, 16, 20, 22, 24, 26, 28, 30.

<210> 47  
<211> 30  
<212> DNA  
<213> Artificial sequence

<400> 47  
ctcccatgg taaaacccgg ttagctgga 30

Two errors above: 1) in the <213> response, please correct the spelling of "Artificial"; 2) please furnish the mandatory explanation of "<213> Artificial Sequence" in a <220>-<223> section: please clearly indicate the source of the genetic material.

\*\*\*\*\*

Application No: 10723908 Version No: 3.0

**Input Set:**

**Output Set:**

**Started:** 2010-09-21 21:45:41.689  
**Finished:** 2010-09-21 21:45:48.274  
**Elapsed:** 0 hr(s) 0 min(s) 6 sec(s) 585 ms  
**Total Warnings:** 59  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 59  
**Actual SeqID Count:** 59

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (13)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 402	Undefined organism found in <213> in SEQ ID (16)
W 402	Undefined organism found in <213> in SEQ ID (17)
W 402	Undefined organism found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (19)
W 402	Undefined organism found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2010-09-21 21:45:41.689  
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Error code	Error Description
	This error has occurred more than 20 times, will not be displayed
W 213	Artificial or Unknown found in <213> in SEQ ID (32)
W 213	Artificial or Unknown found in <213> in SEQ ID (33)
W 213	Artificial or Unknown found in <213> in SEQ ID (34)
W 213	Artificial or Unknown found in <213> in SEQ ID (35)
W 213	Artificial or Unknown found in <213> in SEQ ID (36)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
W 213	Artificial or Unknown found in <213> in SEQ ID (38)
W 213	Artificial or Unknown found in <213> in SEQ ID (39)
W 213	Artificial or Unknown found in <213> in SEQ ID (40)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (42)
W 213	Artificial or Unknown found in <213> in SEQ ID (43)
W 213	Artificial or Unknown found in <213> in SEQ ID (44)
W 213	Artificial or Unknown found in <213> in SEQ ID (45)
W 213	Artificial or Unknown found in <213> in SEQ ID (46)
W 213	Artificial or Unknown found in <213> in SEQ ID (48)
W 213	Artificial or Unknown found in <213> in SEQ ID (49)
W 213	Artificial or Unknown found in <213> in SEQ ID (50)
W 213	Artificial or Unknown found in <213> in SEQ ID (51)
W 213	Artificial or Unknown found in <213> in SEQ ID (52)
	This error has occurred more than 20 times, will not be displayed



SEQUENCE LISTING

<110> Statens Serum Institut

<120> Tuberculosis vaccine and diagnostics  
based on the *Mycobacterium tuberculosis* esat-6 gene family

<130> 23388us1

<140> 10723908

<141> 2010-09-21

<160> 59

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 100

<212> PRT

<213> M.Tuberculosis

<400> 1

Met Ala Glu Met Lys Thr Asp Ala Ala Thr Leu Ala Gln Glu Ala Gly  
1 5 10 15

Asn Phe Glu Arg Ile Ser Gly Asp Leu Lys Thr Gln Ile Asp Gln Val  
20 25 30

Glu Ser Thr Ala Gly Ser Leu Gln Gly Gln Trp Arg Gly Ala Ala Gly  
35 40 45

Thr Ala Ala Gln Ala Ala Val Val Arg Phe Gln Glu Ala Ala Asn Lys  
50 55 60

Gln Lys Gln Glu Leu Asp Glu Ile Ser Thr Asn Ile Arg Gln Ala Gly  
65 70 75 80

Val Gln Tyr Ser Arg Ala Asp Glu Glu Gln Gln Ala Leu Ser Ser  
85 90 95

Gln Met Gly Phe  
100

<210> 2

<211> 95

<212> PRT

<213> M.Tuberculosis

<400> 2

Met Thr Glu Gln Gln Trp Asn Phe Ala Gly Ile Glu Ala Ala Ala Ser  
1 5 10 15

Ala Ile Gln Gly Asn Val Thr Ser Ile His Ser Leu Leu Asp Glu Gly  
20 25 30

Lys Gln Ser Leu Thr Lys Leu Ala Ala Ala Trp Gly Gly Ser Gly Ser  
35 40 45

Glu Ala Tyr Gln Gly Val Gln Gln Lys Trp Asp Ala Thr Ala Thr Glu  
50 55 60

Leu Asn Asn Ala Leu Gln Asn Leu Ala Arg Thr Ile Ser Glu Ala Gly  
65 70 75 80

Gln Ala Met Ala Ser Thr Glu Gly Asn Val Thr Gly Met Phe Ala  
85 90 95

<210> 3  
<211> 96  
<212> PRT  
<213> M.Tuberculosis

<400> 3  
Met Ser Gln Ile Met Tyr Asn Tyr Pro Ala Met Leu Gly His Ala Gly  
1 5 10 15  
Asp Met Ala Gly Tyr Ala Gly Thr Leu Gln Ser Leu Gly Ala Glu Ile  
20 25 30  
Ala Val Glu Gln Ala Ala Leu Gln Ser Ala Trp Gln Gly Asp Thr Gly  
35 40 45  
Ile Thr Tyr Gln Ala Trp Gln Ala Gln Trp Asn Gln Ala Met Glu Asp  
50 55 60  
Leu Val Arg Ala Tyr His Ala Met Ser Ser Thr His Glu Ala Asn Thr  
65 70 75 80  
Met Ala Met Met Ala Arg Asp Thr Ala Glu Ala Ala Lys Trp Gly Gly  
85 90 95

<210> 4  
<211> 294  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(294)

<400> 4  
atg agc ctt ttg gat gct cat atc cca cag ttg gtg gcc tcc cag tcg 48  
Met Ser Leu Leu Asp Ala His Ile Pro Gln Leu Val Ala Ser Gln Ser  
1 5 10 15  
  
gcg ttt gcc gcc aag gcg ggg ctg atg cgg cac acg atc ggt cag gcc 96  
Ala Phe Ala Ala Lys Ala Gly Leu Met Arg His Thr Ile Gly Gln Ala  
20 25 30  
  
gag cag gcg gcg atg tcg gct cag gcg ttt cac cag ggg gag tcg tcg 144  
Glu Gln Ala Ala Met Ser Ala Gln Ala Phe His Gln Gly Glu Ser Ser  
35 40 45  
  
gcg gcg ttt cag gcc gcc cat gcc cgg ttt gtg gcg gcg gcc gcc aaa 192  
Ala Ala Phe Gln Ala Ala His Ala Arg Phe Val Ala Ala Ala Lys  
50 55 60  
  
gtc aac acc ttg ttg gat gtc gcg cag gcg aat ctg ggt gag gcc gcc 240  
Val Asn Thr Leu Leu Asp Val Ala Gln Ala Asn Leu Gly Glu Ala Ala  
65 70 75 80  
  
ggt acc tat gtg gcc gcc gat gct gcg gcc gcg tcg acc tat acc ggg 288  
Gly Thr Tyr Val Ala Ala Asp Ala Ala Ala Ser Thr Tyr Thr Gly  
85 90 95  
  
ttc tga 294  
Phe \*

<210> 5  
<211> 97  
<212> PRT  
<213> M Tuberculosis

<400> 5  
Met Ser Leu Leu Asp Ala His Ile Pro Gln Leu Val Ala Ser Gln Ser  
1 5 10 15  
Ala Phe Ala Ala Lys Ala Gly Leu Met Arg His Thr Ile Gly Gln Ala  
20 25 30  
Glu Gln Ala Ala Met Ser Ala Gln Ala Phe His Gln Gly Glu Ser Ser  
35 40 45  
Ala Ala Phe Gln Ala Ala His Ala Arg Phe Val Ala Ala Ala Lys  
50 55 60  
Val Asn Thr Leu Leu Asp Val Ala Gln Ala Asn Leu Gly Glu Ala Ala  
65 70 75 80  
Gly Thr Tyr Val Ala Ala Asp Ala Ala Ala Ser Thr Tyr Thr Gly  
85 90 95

Phe

<210> 6  
<211> 339  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(339)

<400> 6  
ttg atc ccc ggt cgg atg gtg ctg aac tgg gaa gat ggc ctc aat gcc 48  
Leu Ile Pro Gly Arg Met Val Leu Asn Trp Glu Asp Gly Leu Asn Ala  
1 5 10 15  
ctt gtt gcg gaa ggg att gag gcc atc gtg ttt cgt act tta ggc gat 96  
Leu Val Ala Glu Gly Ile Glu Ala Ile Val Phe Arg Thr Leu Gly Asp  
20 25 30  
cag tgc tgg ttg tgg gag tcg ctg ccc gac gag gtg cgc cga ctg 144  
Gln Cys Trp Leu Trp Glu Ser Leu Leu Pro Asp Glu Val Arg Arg Leu  
35 40 45  
ccc gag gaa ctg gcc cgg gtg gac gca ttg ttg gac gat ccg gcg ttc 192  
Pro Glu Glu Leu Ala Arg Val Asp Ala Leu Leu Asp Asp Pro Ala Phe  
50 55 60  
ttc gcc ccg ttc gtg ccg ttc gac ccg cgc agg ggc cgg ccg tcg 240  
Phe Ala Pro Phe Val Pro Phe Phe Asp Pro Arg Arg Gly Arg Pro Ser  
65 70 75 80  
acg ccg atg gag gtc tat ctg cag ttg atg ttt gtg aag ttc cgc tac 288  
Thr Pro Met Glu Val Tyr Leu Gln Leu Met Phe Val Lys Phe Arg Tyr  
85 90 95  
cggttgc tat gag tcg ctg tgc cgg gag gtg gct gat tcg atc acc 336

Arg Leu Gly Tyr Glu Ser Leu Cys Arg Glu Val Ala Asp Ser Ile Thr  
100 105 110

tga 339

<210> 7  
<211> 112  
<212> PRT  
<213> M Tuberculosis

<400> 7  
Met Ile Pro Gly Arg Met Val Leu Asn Trp Glu Asp Gly Leu Asn Ala  
1 5 10 15  
Leu Val Ala Glu Gly Ile Glu Ala Ile Val Phe Arg Thr Leu Gly Asp  
20 25 30  
Gln Cys Trp Leu Trp Glu Ser Leu Leu Pro Asp Glu Val Arg Arg Leu  
35 40 45  
Pro Glu Glu Leu Ala Arg Val Asp Ala Leu Leu Asp Asp Pro Ala Phe  
50 55 60  
Phe Ala Pro Phe Val Pro Phe Phe Asp Pro Arg Arg Gly Arg Pro Ser  
65 70 75 80  
Thr Pro Met Glu Val Tyr Leu Gln Leu Met Phe Val Lys Phe Arg Tyr  
85 90 95  
Arg Leu Gly Tyr Glu Ser Leu Cys Arg Glu Val Ala Asp Ser Ile Thr  
100 105 110

<210> 8  
<211> 285  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(285)

<400> 8  
atg acc atc aac tat caa ttc ggg gac gtc gac gct cac ggc gcc atg 48  
Met Thr Ile Asn Tyr Gln Phe Gly Asp Val Asp Ala His Gly Ala Met  
1 5 10 15

atc cgc gct cag gcc ggg tcg ctg gag gcc gag cat cag gcc atc att 96  
Ile Arg Ala Gln Ala Gly Ser Leu Glu Ala Glu His Gln Ala Ile Ile  
20 25 30

tct gat gtg ttg acc gcg agt gac ttt tgg ggc ggc gcc ggt tcg gcg 144  
Ser Asp Val Leu Thr Ala Ser Asp Phe Trp Gly Gly Ala Gly Ser Ala  
35 40 45

gcc tgc cag ggg ttc att acc cag ctg ggc cgt aac ttc cag gtg atc 192  
Ala Cys Gln Gly Phe Ile Thr Gln Leu Gly Arg Asn Phe Gln Val Ile  
50 55 60

tac gag cag gcc aac gcc cac ggg cag aag gtg cag gct gcc ggc aac 240  
Tyr Glu Gln Ala Asn Ala His Gly Gln Lys Val Gln Ala Ala Gly Asn  
65 70 75 80

aac atg gca caa acc gac agc gcc gtc ggc tcc agc tgg gcc taa 285

Asn Met Ala Gln Thr Asp Ser Ala Val Gly Ser Ser Trp Ala \*  
85 90

<210> 9  
<211> 94  
<212> PRT  
<213> M Tuberculosis

<400> 9  
Met Thr Ile Asn Tyr Gln Phe Gly Asp Val Asp Ala His Gly Ala Met  
1 5 10 15  
Ile Arg Ala Gln Ala Gly Leu Leu Glu Ala Glu His Gln Ala Ile Val  
20 25 30  
Arg Asp Val Leu Ala Ala Gly Asp Phe Trp Gly Gly Ala Gly Ser Val  
35 40 45  
Ala Cys Gln Glu Phe Ile Thr Gln Leu Gly Arg Asn Phe Gln Val Ile  
50 55 60  
Tyr Glu Gln Ala Asn Ala His Gly Gln Lys Val Gln Ala Ala Gly Asn  
65 70 75 80  
Asn Met Ala Gln Thr Asp Ser Ala Val Gly Ser Ser Trp Ala  
85 90

<210> 10  
<211> 285  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(282)

<400> 10  
atg acc atc aac tat cag ttc ggt gat gtc gac gct cat ggc gcc atg 48  
Met Thr Ile Asn Tyr Gln Phe Gly Asp Val Asp Ala His Gly Ala Met  
1 5 10 15  
  
atc cgc gct cag gcc ggg ttg ctg gag gcg gag cat cag gcc atc gtt 96  
Ile Arg Ala Gln Ala Gly Leu Leu Glu Ala Glu His Gln Ala Ile Val  
20 25 30  
  
cgt gat gtg ttg gcc gcg ggt gac ttt tgg ggc ggc gcc ggt tcg gtg 144  
Arg Asp Val Leu Ala Ala Gly Asp Phe Trp Gly Gly Ala Gly Ser Val  
35 40 45  
  
gct tgc cag gag ttc att acc cag ttg ggc cgt aac ttc cag gtg atc 192  
Ala Cys Gln Glu Phe Ile Thr Gln Leu Gly Arg Asn Phe Gln Val Ile  
50 55 60  
  
tac gag cag gcc aac gcc cac ggg cag aag gtg cag gct gcc ggc aac 240  
Tyr Glu Gln Ala Asn Ala His Gly Gln Lys Val Gln Ala Ala Gly Asn  
65 70 75 80  
  
aac atg gca caa acc gac agc gcc gtc ggc tcc agc tgg gcc 282  
Asn Met Ala Gln Thr Asp Ser Ala Val Gly Ser Ser Trp Ala  
85 90

<210> 11  
<211> 94  
<212> PRT  
<213> M Tuberculosis

<400> 11  
Met Thr Ile Asn Tyr Gln Phe Gly Asp Val Asp Ala His Gly Ala Met  
1 5 10 15  
Ile Arg Ala Gln Ala Gly Leu Leu Glu Ala Glu His Gln Ala Ile Val  
20 25 30  
Arg Asp Val Leu Ala Ala Gly Asp Phe Trp Gly Gly Ala Gly Ser Val  
35 40 45  
Ala Cys Gln Glu Phe Ile Thr Gln Leu Gly Arg Asn Phe Gln Val Ile  
50 55 60  
Tyr Glu Gln Ala Asn Ala His Gly Gln Lys Val Gln Ala Ala Gly Asn  
65 70 75 80  
Asn Met Ala Gln Thr Asp Ser Ala Val Gly Ser Ser Trp Ala  
85 90

<210> 12  
<211> 327  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(327)

<400> 12  
gtg ctt ttg cct ctt ggt ccg cct ttg ccg ccc gac gcg gtg gtg gcg 48  
Val Leu Leu Pro Leu Gly Pro Pro Leu Pro Pro Asp Ala Val Val Ala  
1 5 10 15  
  
aaa cgg gct gag tcg gga atg ctc ggc ggg ttg tcg gtt ccg ctc agc 96  
Lys Arg Ala Glu Ser Gly Met Leu Gly Leu Ser Val Pro Leu Ser  
20 25 30  
  
tgg gga gtg gct gtg cca ccc gat gat tat gac cac tgg gcg cct gcg 144  
Trp Gly Val Ala Val Pro Pro Asp Asp Tyr Asp His Trp Ala Pro Ala  
35 40 45  
  
ccg gag gac ggc gcc gat gtc gat gtc cag gcg gcc gaa ggg gcg gac 192  
Pro Glu Asp Gly Ala Asp Val Asp Val Gln Ala Ala Glu Gly Ala Asp  
50 55 60  
  
gca gag gcc gcc atg gac gag tgg gat gag tgg cag gcg tgg aac 240  
Ala Glu Ala Ala Ala Met Asp Glu Trp Asp Glu Trp Gln Ala Trp Asn  
65 70 75 80  
  
gag tgg gtg gcg gag aac gct gaa ccc cgc ttt gag gtg cca cgg agt 288  
Glu Trp Val Ala Glu Asn Ala Glu Pro Arg Phe Glu Val Pro Arg Ser  
85 90 95  
  
agc agc agc gtg att ccg cat tct ccg gcg gcc ggc tag 327  
Ser Ser Ser Val Ile Pro His Ser Pro Ala Ala Gly \*

100

105

<210> 13  
<211> 108  
<212> PRT  
<213> M Tuberculosis

<400> 13

Met	Leu	Leu	Pro	Leu	Gly	Pro	Pro	Leu	Pro	Pro	Asp	Ala	Val	Val	Ala
1						5			10				15		
Lys	Arg	Ala	Glu	Ser	Gly	Met	Leu	Gly	Gly	Leu	Ser	Val	Pro	Leu	Ser
						20			25			30			
Trp	Gly	Val	Ala	Val	Pro	Pro	Asp	Asp	Tyr	Asp	His	Trp	Ala	Pro	Ala
						35			40			45			
Pro	Glu	Asp	Gly	Ala	Asp	Val	Asp	Val	Gln	Ala	Ala	Glu	Gly	Ala	Asp
	50					55			60						
Ala	Glu	Ala	Ala	Ala	Met	Asp	Glu	Trp	Asp	Glu	Trp	Gln	Ala	Trp	Asn
65						70			75			80			
Glu	Trp	Val	Ala	Glu	Asn	Ala	Glu	Pro	Arg	Phe	Glu	Val	Pro	Arg	Ser
						85			90			95			
Ser	Ser	Ser	Val	Ile	Pro	His	Ser	Pro	Ala	Ala	Gly				
						100			105						

<210> 14  
<211> 324  
<212> DNA  
<213> M Tuberculosis

<220>  
<221> CDS  
<222> (1)...(324)

<400> 14

ttg	acc	cac	aag	cgc	act	aaa	cgc	cag	cca	gcc	atc	gcc	gca	ggg	ctc	48
Leu																
Lys	Thr	His	Lys	Arg	Thr	Lys	Arg	Gln	Pro	Ala	Ile	Ala	Ala	Gly	Leu	
1											5		10		15	
aac	gcc	ccg	cgt	cgg	aat	cgc	gtt	ggg	cgg	caa	cat	ggt	tgg	ccg	gcc	96
Asn	Ala	Pro	Arg	Arg	Asn	Arg	Val	Gly	Arg	Gln	His	Gly	Trp	Pro	Ala	
											20		25		30	
gac	gtt	ccg	tcc	gcc	gag	cag	cgc	cgc	gcc	caa	cgg	cag	cgc	gac	ctc	144
Asp	Val	Pro	Ser	Ala	Glu	Gln	Arg	Arg	Ala	Gln	Arg	Gln	Arg	Asp	Leu	
											35		40		45	
gag	gct	atc	cgc	cga	gcg	tac	gcc	gag	atg	gtg	gcg	aca	tca	cac	gaa	192
Glu	Ala	Ile	Arg	Arg	Ala	Tyr	Ala	Glu	Met	Val	Ala	Thr	Ser	His	Glu	
											50		55		60	
atc	gac	gac	aca	gcc	gaa	ctg	gcg	ctg	ttg	tcg	atg	cat	ctc	gac	240	
Ile	Asp	Asp	Asp	Thr	Ala	Glu	Leu	Ala	Leu	Leu	Ser	Met	His	Leu	Asp	
											65		70		75	
gat	gag	cag	cgc	cgg	ctt	gag	gcg	ggg	atg	aag	ctc	ggc	tgg	cat	ccg	288
Asp	Glu	Gln	Arg	Arg	Leu	Glu	Ala	Gly	Met	Lys	Leu	Gly	Trp	His	Pro	
											85		90		95	

tat cac ttc ccc gac gaa ccc gac agc aaa cag tga 324  
 Tyr His Phe Pro Asp Glu Pro Asp Ser Lys Gln \*  
                   100                  105

<210> 15  
<211> 107  
<212> PRT  
<213> M Tuberculosis

```

<400> 15
Met Thr His Lys Arg Thr Lys Arg Gln Pro Ala Ile Ala Ala Gly Leu
      1           5           10           15
Asn Ala Pro Arg Arg Asn Arg Val Gly Arg Gln His Gly Trp Pro Ala
      20          25          30
Asp Val Pro Ser Ala Glu Gln Arg Arg Ala Gln Arg Gln Arg Asp Leu
      35          40          45
Glu Ala Ile Arg Arg Ala Tyr Ala Glu Met Val Ala Thr Ser His Glu
      50          55          60
Ile Asp Asp Asp Thr Ala Glu Leu Ala Leu Leu Ser Met His Leu Asp
      65          70          75          80
Asp Glu Gln Arg Arg Leu Glu Ala Gly Met Lys Leu Gly Trp His Pro
      85          90          95
Tyr His Phe Pro Asp Glu Pro Asp Ser Lys Gln
      100         105

```

<210> 16  
<211> 246  
<212> DNA  
<213> M. Tuberculosis

<220>  
<221> CDS  
<222> (1) ... (246)

<400> 16  
atg agc ggc cac gcg ttg gct cggttgcgatggccggccgac 48  
Met Ser Gly His Ala Leu Ala Ala Arg Thr Leu Leu Ala Ala Ala Asp  
1 5 10 15

gag ctt gtc ggc ggc ccg cca gtc gag gct tcg gcc gcc gcg ctg gcc 96  
 Glu Leu Val Gly Gly Pro Pro Val Glu Ala Ser Ala Ala Ala Leu Ala  
                   20                  25                  30

```

ggc gac gcc gcg ggc gca tgg cgg acc gcg gcc gtc gag ctt gcg cga 144
Gly Asp Ala Ala Gly Ala Trp Arg Thr Ala Ala Val Glu Leu Ala Arg
35          40          45

```

```

gcg ttg gtc cgc gct gtg gcg gag tcg cac ggc gtc gcg gcc gtt ttg 192
Ala Leu Val Arg Ala Val Ala Glu Ser His Gly Val Ala Ala Val Leu
      50           55           60

```

ttc gcc gcg acg gcc gcg gcg gcg gac gtc gac ggg ggt gat ccg 240  
Phe Ala Ala Thr Ala Ala Al